

Art Unit: 2800

Clmpto

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1. (original) A method for fabricating a capacitor, comprising the steps of:

- a) forming a lower electrode on a semiconductor substrate;
- b) forming a dielectric layer on the lower electrode;
- c) loading the semiconductor substrate containing the dielectric layer into a deposition chamber;
- d) nitriding a surface of the dielectric layer while NH_3 gas is flowed into the deposition chamber; and
- e) forming an upper layer by using a source gas NH_3 , containing Titanium (Ti) on the nitrated surface of the dielectric layer through an atomic layer deposition (ALD) method.

2. (original) The method as recited in claim 1, wherein the step d) is performed on condition that the source gas NH_3 is flowed in at a flow rate of about 300 sccm to about 1000 sccm for about 10 seconds to about 120 seconds.

7. (currently amended) The method as recited in claim 3, wherein step b1) further includes the steps of:

- a2) ~~absorbing the TiCl_4 onto the dielectric layer by feeding the TiCl_4 ;~~
- b2) feeding the TiCl_4 gas in order to ~~make it absorbed~~ adsorb the TiCl_4 on onto the dielectric layer;
- c2) purging a remnant remnants of the TiCl_4 gas remaining after the absorption adsorption;
- d2) feeding NH_3 gas ~~on~~ onto a surface of the dielectric layer on which the TiCl_4 is already ~~absorbed~~ adsorbed; and
- e2) purging a remnant of the NH_3 gas and a by-product which is formed by a chemical reaction between the NH_3 and the TiCl_4 .

8. (new) The method as recited in claim 1, wherein the upper layer includes a TiN layer formed by the ALD method using TiCl_4 gas as a precursor.